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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/568,147

02/13/2006

Kanshi Chinone

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07/14/2008

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EXAMINER

MARCHESCHI, MICHAEL A

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1793

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/568,147	Applicant(s) CHINONE, KANSHI	
	Examiner Michael A. Marcheschi	Art Unit 1793	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 15 May 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-7 is/are pending in the application.
- 4a) Of the above claim(s) 6 and 7 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-5 is/are rejected.
- 7) ☒ Claim(s) 1 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Newly submitted claims 6-7 are directed to an invention that is independent or distinct from the invention originally claimed for the following reasons:

The newly submitted claims are directed to a method of making a polishing slurry (group II) and the originally elected invention is directed to a polishing slurry composition (group I).

Inventions I and II are related as process of making and product made. The inventions are distinct if either or both of the following can be shown: (1) that the process as claimed can be used to make another and materially different product or (2) that the product as claimed can be made by another and materially different process (MPEP § 806.05(f)). In the instant case, the product as claimed can be made by another and materially different process, such as one that employ a different filtering mechanism or one that only filters once.

If both these groups were originally claimed, a restriction would have been applied initially.

Since applicant has received an action on the merits for the originally presented invention, this invention has been constructively elected by original presentation for prosecution on the merits. Accordingly, claims 6-7 are withdrawn from consideration as being directed to a non-elected invention. See 37 CFR 1.142(b) and MPEP § 821.03.

Claim 1 is objected to because of the following informalities:

The comma between "500" and "ppm" should be canceled from claim 1. Appropriate correction is required.

Claims 1-5 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 1 is indefinite as to the limitation "film type filter" because the examiner is unclear as to what "type" means when used in the above limitation. Is it a film or not?

The other claims are indefinite because they depend on an indefinite claim.

Claims 1-3 and 5 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Pasqualoni et al. (671).

The reference teaches in the abstract and sections [0019] and [0029], a polishing composition comprising ceria and a dispersing agent (surfactant), wherein all of the ceria particles can have a maximum size less than 0.5 microns (reads on claimed limitations).

The claimed invention is anticipated by the reference because the reference teaches a composition which comprises all of the claimed limitations. In the alternative, no patentable distinction is seen to exist between the reference and the claimed invention because the subject matter as a whole would have been obvious to one having ordinary skill in the art at the time the invention was made to have selected the overlapping portion of the range disclosed by the reference because overlapping ranges have been held to be a prima facie case of obviousness, see *In re Malagari*, 182 U.S.P.Q. 549; *In re Wertheim* 191 USPQ 90 (CCPA 1976).

With respect to the limitation on how the size of the particles is calculated (i.e. measured) or produced (by filtering using a specific filtration device), these limitations are defining how the particles are produced and it is well established that the use of process limitations to define the product in "product-by-process" claims do not patentably distinguish the product even though made by a different process. *In re Thorpe* 227 USPQ 964. The fact is that the reference teaches a cerium oxide polishing slurry that contains no coarse particles (i.e. no particles larger than 0.5 microns). Applicants are reminded that the limitation defined in claim 1 of "having a diameter of at least 3 microns is not more than 500 ppm" reads on no particles having a size of 3 microns or more because "not more than" reads on zero.

Claim 4 is rejected under 35 U.S.C. 103(a) as obvious over Pasqualoni et al. (671).

With respect to the average size, this reference clearly implies that the term "particle" refers to the average size (section 0016) and since no particles having an average size of 0.5 microns are present, the average size must be less than 0.5 microns thus broadly encompassing the claimed range absent evidence to the contrary.

Claims 1-5 are rejected under 35 U.S.C. 102(a) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Uchino et al. (206).

The reference teaches in claims 1 and 6, a polishing composition comprising ceria and a dispersing agent, wherein all of the ceria particles can have maximum size of a 0.5 microns (reads on claimed limitations). Section 0018 teaches that the average size is between 0.3-0.6 microns.

The claimed invention is anticipated by the reference because the reference teaches a composition which comprises all of the claimed limitations. In the alternative, no patentable distinction is seen to exist between the reference and the claimed invention because the subject matter as a whole would have been obvious to one having ordinary skill in the art at the time the invention was made to have selected the overlapping portion of the range disclosed by the reference because overlapping ranges have been held to be a prima facie case of obviousness, see *In re Malagari*, 182 U.S.P.Q. 549; *In re Wertheim* 191 USPQ 90 (CCPA 1976).

With respect to the limitation on how the size of the particles is calculated (i.e. measured) or produced (by filtering using a specific filtration device), these limitations are defining how the particles are produced and it is well established that the use of process limitations to define the product in "product-by-process" claims do not patentably distinguish the product even though made by a different process. *In re Thorpe* 227 USPQ 964. The fact is that the reference teaches a cerium oxide polishing slurry that contains no coarse particles (i.e. no particles larger than 3 microns). Applicants are reminded that the limitation defined in claim 1 of "having a diameter of at least 3 microns is not more than 500 ppm" reads on no particles having a size of 3 microns or more because "not more than" reads on zero.

Claims 1-2 and 5 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Kido et al. (836).

The reference teaches in column 3, lines 17-18, column 4, lines 45-50 and column 6, lines 10-11, a polishing composition comprising ceria and a dispersing agent, wherein all of the ceria particles have a maximum size less than 2 microns (reads on claimed limitations).

The claimed invention is anticipated by the reference because the reference teaches a composition which comprises all of the claimed limitations. In the alternative, no patentable distinction is seen to exist between the reference and the claimed invention because the subject matter as a whole would have been obvious to one having ordinary skill in the art at the time the invention was made to have selected the overlapping portion of the range disclosed by the reference because overlapping ranges have been held to be a prima facie case of obviousness, see *In re Malagari*, 182 U.S.P.Q. 549; *In re Wertheim* 191 USPQ 90 (CCPA 1976).

With respect to the limitation on how the size of the particles is calculated (i.e. measured) or produced (by filtering using a specific filtration device), these limitations are defining how the particles are produced and it is well established that the use of process limitations to define the product in "product-by-process" claims do not patentably distinguish the product even though made by a different process. *In re Thorpe* 227 USPQ 964. The fact is that the reference teaches a cerium oxide polishing slurry that can contains no coarse particles (i.e. no particles larger than 3 microns). Applicants are reminded that the limitation defined in claim 1 of "having a diameter of at least 3 microns is not more than 500 ppm" reads on no particles having a size of 3 microns or more because "not more than" reads on zero.

Claims 3 and 4 are rejected under 35 U.S.C. 103(a) as obvious over Kido et al. (836).

With respect to claim 3, no patentable distinction is seen to exist between the reference and the claimed invention because the subject matter as a whole would have been obvious to one having ordinary skill in the art at the time the invention was made to have selected the overlapping portion of the range disclosed by the reference because overlapping ranges have

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been held to be a prima facie case of obviousness, see *In re Malagari*, 182 U.S.P.Q. 549; *In re Wertheim* 191 USPQ 90 (CCPA 1976).

With respect to claim 4, the reference teaches that the maximum size is 2 microns or less thus one would have clearly appreciated that the average size can be any and all values below this especially since not all particles will be the same size.

Claims 1-2, 4 and 5 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Yoshida et al. (118).

The reference teaches in the abstract and column 2, lines 4-5, a polishing composition comprising ceria and a dispersing agent, wherein all of the ceria particles have a maximum size less than 3 microns. The average size is defined as 150-600 nm (claimed range).

The claimed invention is anticipated by the reference because the reference teaches a composition which comprises all of the claimed limitations. In the alternative, no patentable distinction is seen to exist between the reference and the claimed invention because the subject matter as a whole would have been obvious to one having ordinary skill in the art at the time the invention was made to have selected the overlapping portion of the range disclosed by the reference because overlapping ranges have been held to be a prima facie case of obviousness, see *In re Malagari*, 182 U.S.P.Q. 549; *In re Wertheim* 191 USPQ 90 (CCPA 1976).

With respect to the limitation on how the size of the particles is calculated (i.e. measured) or produced (by filtering using a specific filtration device), these limitations are defining how the particles are produced and it is well established that the use of process limitations to define the product in "product-by-process" claims do not patentably distinguish the product even though

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made by a different process. *In re Thorpe* 227 USPQ 964. The fact is that the reference teaches a cerium oxide polishing slurry that contains no coarse particles (i.e. no particles larger than 0.5 microns). Applicants are reminded that the limitation defined in claim 1 of "having a diameter of at least 3 microns is not more than 500 ppm" reads on no particles having a size of 3 microns or more because "not more than" reads on zero.

Claim 3 is rejected under 35 U.S.C. 103(a) as obvious over Yoshida et al. (118).

No patentable distinction is seen to exist between the reference and the claimed invention because the subject matter as a whole would have been obvious to one having ordinary skill in the art at the time the invention was made to have selected the overlapping portion of the range disclosed by the reference because overlapping ranges have been held to be a prima facie case of obviousness, see *In re Malagari*, 182 U.S.P.Q. 549; *In re Wertheim* 191 USPQ 90 (CCPA 1976).

Applicant's arguments filed 5/15/08 have been fully considered but they are not persuasive.

Applicants arguments amount to no more than the references failing to teach (1) how the sizes are filtered (i.e. what type of filtration is used) and/or (2) how the size is measured (i.e. accusizer, laser diffraction). The examiner acknowledges this, however applicants are relying on process limitation to establish patentability over the product claims. This is not persuasive because it is well established that the use of process limitations to define the product in "product-by-process" claims do not patentably distinguish the product even though made by a different

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process. *In re Thorpe* 227 USPQ 964. In other words, the type of filtering mechanism and how the particles size is measured in immaterial especially since all the references clearly disclose that no particles having a size of more than 3 microns (or 1 micron) are present in the respective slurries of the references. Applicants do not establish any evidence that would clearly show the contrary (i.e. that the reference slurries must contain more than 500 ppm particles having a size more than 3 microns).

Specifically, applicants argue that Pasqualoni describes only silica. This is not persuasive because this reference states that ceria can be used in place of silica. Applicants also argue that in this reference, one cannot detect small contents of particles. Although this may be true (examiner is not in full agreement on this issue especially since no proof is defined), the reference clearly teaches that the content of large particles (i.e. 0.5 micron or more) is in terms of “less than” and “less than” reads on zero or any value below the recited one and thus, it can be reasonably interpreted that the content of particles larger than 0.5 microns can be in the ppm range or even zero. In addition, section 0021 refers to filtering the size (i.e. 0.5 microns) and with such a filter of a size of 0.5 microns, one would expect that the amount of particles having a size above 0.5 microns would clearly be minimal (i.e. ppm range). Applicants do not establish clear evidence otherwise.

With respect to the other references applied, it is to be noted that all the references specifically teach or imply (by way of a maximum size defined) that no particles have a size larger than 3 microns (or 1 micron) and this reads on the claimed invention because “less than 500 ppm reads on zero. Applicants present arguments about the measurement, however, they fail to establish clear supporting evidence that all the references must have a sizes above 3

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microns (i.e. tangible evidence (comparative data) to show that in all of the references, particles above 3 microns are in fact present). Since no such evidence is provided, the rejections stand.

In summary, the fact is that the references all teaches cerium oxide polishing slurries that can contains no coarse particles (i.e. no particles larger than 3 or 1 microns). Applicants are reminded that the limitation defined in claim 1 of “having a diameter of at least 3 microns is not more than 500 ppm” reads on no particles having a size of 3 microns or more because “not more than” reads on zero.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael A. Marcheschi whose telephone number is (571) 272-1374. The examiner can normally be reached on M-F (8:00-5:30) First Friday Off.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jerry Lorengo can be reached on (571) 272-1233. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/Michael A Marcheschi/
Primary Examiner, Art Unit 1793